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| Unit Title:Geometry | Pacing (Duration of Unit): |
| Grade:7 | Buffer Day(s): |

Transfer Goals

Students will be able to independently use their learning to:

- Make sense of problems and persevere in solving them.
 - Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
 - Model with mathematics.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

•**Use appropriate tools strategically.**

•Attend to precision.

Desired Results

Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)

| Standards (Priority Standards in bold): | WiDA Standards (ELL) |
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| <p>7.G.3: Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.</p> <p>7.G.4: Know the formulas for the area and circumference of a circle and solve problems; give an informal derivation of the relationship between the circumference and area of a circle.</p> <p>7.G.5: Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and use them to solve simple equations for an unknown angle in a figure.</p> <p>7.G.6: Solve real-world and mathematical problems involving area, volume, and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.</p> <p>7.G.MA.7: Solve real-world and mathematical problems involving the surface area of spheres.</p> | <ul style="list-style-type: none"> • • • • • <p>To be completed in collaboration with the ELL Department</p> |

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| Meaning (*Mostly assessed through Performance Tasks/Assessments) |
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| <p>Big Ideas: (Statements and concepts written in teacher friendly language which reflect the important [but not obvious] generalizations we want students to be able to arrive at. These are used by the teacher to focus daily instruction.)</p> <ul style="list-style-type: none"> • Geometrical 2 and 3 dimensional figures and their characteristics • Formulas are equations that can be used to determine any unknown dimension of the figure. • Relationship between angles formed by different lines can be used to find unknown measure angles. | <p>Essential Questions: (Questions which frame ongoing and important inquires about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.)</p> <ul style="list-style-type: none"> • How can Algebraic concepts and formulas be applied to Geometry? |
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Acquisition (*Mostly assessed through traditional summative assessments)

Knowledge: Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.

Students will know ...

- The formulas for area and circumference of circles
- The formulas for area volume and surface area of triangles, quadrilaterals, polygons, cubes , right prisms and spheres
- Facts about supplementary , complementary, vertical and adjacent angles
- The results of slicing a three dimensional figure in to a two dimensional plane section

Key Content vocabulary

Plane sections
Right rectangular pyramids
Spheres
Supplementary angles
Complementary
Vertical
Adjacent

Skills: The discrete skills and process students should be able to use independently (Bloom's Level of Learning should be noted in parentheses.)

Students will be skilled at:

- Rewriting a formula to solve for any unknown variable
- Selecting and using the appropriate formula to solve real life and mathematical problems
- Determine and express solutions with correct units of measurement
- Finding missing angle measures based on facts and angle relationships (write and solve simple equations)